

ACHIEVEMENTS

AWARDS

1. The Best Student Paper-Second Place in Electronics, Applied Superconductivity Conference and IEEE Council of Superconductivity, 2014.8.15.
2. 博士前期課程の研究科長賞, 岡山大学自然科学研究科 電子情報システム工学専攻 電気電子機能開発講座, 2013.3.25.
3. 第 33 回 (2012 年秋季) 応用物理学会講演奨励賞, 「サンプル振動型磁化率計の高感度計測法」第 73 秋季 回応用物理学会学術講演会, 愛媛, 2012.9.11-14.

REFERED PAPERS

1. **M. M. Saari**, K. Sakai, T. Kiwa, T. Sasayama, T. Yoshida, and K. Tsukada, "Characterization of the magnetic moment distribution in low-concentration solutions of iron oxide nanoparticles by a high-T_c superconducting quantum interference device magnetometer," *J. Appl. Phys.*, vol. 117, no. 17, p. 17B321, May 2015.
2. **M. M. Saari**, Y. Ishihara, Y. Tsukamoto, T. Kusaka, K. Morita, K. Sakai, T. Kiwa, and K. Tsukada, "Optimization of an AC/DC High-T_c SQUID Magnetometer Detection Unit for Evaluation of Magnetic Nanoparticles in Solution," *IEEE Trans. Appl. Supercond.*, vol. 25, no. 3, pp. 1-4, Jun. 2015.
3. **M. M. Saari**, Y. Tsukamoto, T. Kusaka, Y. Ishihara, K. Sakai, T. Kiwa, and K. Tsukada, "Effect of diamagnetic contribution of water on harmonics distribution in a dilute solution of iron oxide nanoparticles measured using high-T_c SQUID magnetometer," *J. Magn. Magn. Mater.*, vol. 394, pp. 260-265, Nov. 2015.
4. **M. M. Saari**, K. Sakai, T. Kiwa, and K. Tsukada, "Optimization of the Detection Technique for a Vibrating-Sample Magnetometer Using High-T_c SQUID," *IEEE Trans. Appl. Supercond.*, vol. 23, no. 3, p. 1600204, Jun. 2013.
5. **M. M. Saari**, K. Sakai, T. Kiwa, A. Tsukamoto, S. Adachi, K. Tanabe, A. Kandori, and K. Tsukada, "Development of a Compact Moving-Sample Magnetometer Using High-T_c Superconducting Quantum Interference Device," *Jpn. J. Appl. Phys.*, vol. 51, p. 046601, Mar. 2012.

6. T. Sasayama, T. Yoshida, **M. M. Saari**, and K. Enpuku, "Comparison of volume distribution of magnetic nanoparticles obtained from M-H curve with a mixture of log-normal distributions," *J. Appl. Phys.*, vol. 117, no. 17, p. 17D155, May 2015.
7. K. Sakai, N. Okamoto, Y. Watanabe, **M. M. Saari**, T. Kiwa, and K. Tsukada, "Moisture Content Evaluation Using Improved High-Tc SQUID-Based Rotating-Sample Magnetometer," *IEEE Trans. Appl. Supercond.*, vol. 25, no. 3, pp. 1–5, Jun. 2015.
8. K. Tsukada, T. Kusaka, **M. M. Saari**, R. Takagi, K. Sakai, T. Kiwa, and Y. Bito, "Magnetic susceptibility and magnetic resonance measurements of the moisture content and hydration condition of a magnetic mixture material," *J. Appl. Phys.*, vol. 115, no. 17, p. 17E301, May 2014.
9. T. Kiwa, S. Miyazaki, **M. M. Saari**, K. Sakai, A. Tsukamoto, S. Adachi, T. Hato, K. Tanabe, and K. Tsukada, "Visualization of ion transportation in an electrolyte using an HTS-SQUID gradiometer," *Phys. C Supercond.*, vol. 504, pp. 84–87, Sep. 2014.
10. T. Kiwa, Y. Fukudome, S. Miyazaki, **M. M. Saari**, K. Sakai, and K. Tsukada, "Magnetic evaluation of a solar panel using HTS-SQUID," *Phys. C Supercond.*, vol. 494, pp. 195–198, Nov. 2013.
11. T. Kiwa, Y. Fukudome, S. Miyazaki, **M. M. Saari**, K. Sakai, A. Tsukamoto, S. Adachi, K. Tanabe, A. Kandori, and K. Tsukada, "Magnetic Detection of Currents in an Electrolytic Cell Using High-Tc SQUID," *IEEE Trans. Appl. Supercond.*, vol. 23, no. 3, p. 1600804, Jun. 2013.
12. K. Sakai, **M. M. Saari**, T. Kiwa, and K. Tsukada, "Compact Rotating-Sample Magnetometer for Relaxation Phenomenon Measurement Using HTS-SQUID," *IEEE Trans. Appl. Supercond.*, vol. 23, no. 3, pp. 1601904–1601904, Jun. 2013.
13. K. Sakai, **M. M. Saari**, T. Kiwa, A. Tsukamoto, S. Adachi, K. Tanabe, A. Kandori, and K. Tsukada, "Development of a compact DC magnetometer using HTS-SQUID and a rotating sample," *Supercond. Sci. Technol.*, vol. 25, no. 4, p. 045005, Apr. 2012.

OTHER PAPERS

1. **M. M. Saari**, R. Takagi, T. Kusaka, Y. Ishihara, Y. Tsukamoto, K. Sakai, T. Kiwa, and K. Tsukada, "Development of integrated AC-DC magnetometer using high- T_c SQUID for magnetic properties evaluation of magnetic nanoparticles in solution," *J. Phys. Conf. Ser.*, vol. 507, no. 4, p. 042035, May 2014.
2. R. Takagi, **M. M. Saari**, K. Sakai, T. Kiwa, and K. Tsukada, "Development of a compact magnetometer with an AC/DC magnetic field using HTS-SQUID," in *Superconductive Electronics Conference (ISEC), 2013 IEEE 14th International*, 2013, pp. 1–3.

ORAL AND POSTER PRESENTATIONS

(INTERNATIONAL CONFERENCES)

1. **Mohd Mawardi Saari**, Kenji Sakai, Toshihiko Kiwa, Teruyoshi Sasayama, Takashi Yoshida and Keiji Tsukada, "*Characterization of magnetic moment distribution in low-concentrated solutions of iron oxide nanoparticles by high- T_c SQUID magnetometer*", 59th Annual Conference on Magnetism and Magnetic Materials (MMM 2014), 3-7 November 2014, Hawaii, USA.
2. Toki Kusaka, **Mohd Mawardi Saari**, Yuichi Ishihara, Yuya Tsukamoto, Kenji Sakai, Toshihiko Kiwa, Keiji Tsukada, "*Measurement of moisture content using HTS-SQUID magnetometer*", Progress In Electromagnetics Research Symposium (PIERS 2014), 2014/8/25-28, Guangzhou, China.
3. Shohei Kasuya, Kohei Tanaka, **Mohd Mawardi Saari**, Kenji Sakai, Toshihiko Kiwa, Keiji Tsukada, "*Development of DC Current Distribution Mapping System for Solar Panels Using an HTS-SQUID Gradiometer*", Progress In Electromagnetics Research Symposium (PIERS 2014), 2014/8/25-28, Guangzhou, China.
4. Naohiro Okamoto, Yuta Watanabe, **Mohd Mawardi Saari**, Kenji Sakai, Toshihiko Kiwa, Keiji Tsukada, "*Highly Sensitive Detection Method for Rotating Sample Magnetometer Using HTS-SQUID*", Progress In Electromagnetics Research Symposium (PIERS 2014), 2014/8/25-28, Guangzhou, China.
5. Yuichi Ishihara, **Mohd Mawardi Saari**, Toki Kusaka, Yuya Tsukamoto, Kenji Sakai, Toshihiko Kiwa, Keiji Tsukada, "*Optimization of Pickup Coil in Compact Magnetometer with DC/AC Unit Employing High- T_c SQUID*", Progress In Electromagnetics Research Symposium (PIERS 2014), 2014/8/25-28, Guangzhou, China.

6. **Mohd Mawardi Saari**, Yuya Tsukamoto, Yuichi Ishihara, Toki Kusaka, Koji Morita, Kenji Sakai, Toshihiko Kiwa and Keiji Tsukada, "*Optimization of Detection Unit of AC/DC High-Tc SQUID Magnetometer for Evaluation of Magnetic Nanoparticles in Solution*", Applied Superconductivity Conference 2014 (ASC 2014), 10-15 August 2014, Charlotte, NC, USA.
7. Toshihiko Kiwa, Shouhei Kasuya, Shingo Miyazaki, **Mohd Mawardi Saari**, Kenji Sakai, Keiji Tsukada, "*Ion transportation observed by an HTS-SQUID gradiometer*", Applied Superconductivity Conference 2014 (ASC 2014), 10-15 August 2014, Charlotte, NC, USA.
8. Kenji Sakai, Naohiro Okamoto, Toki Kusaka, **Mohd Mawardi Saari**, Toshihiko Kiwa, Keiji Tsukada, "*Moisture Content Evaluation Using Improved High-Tc SQUID Based Rotating-Sample Magnetometer*", Applied Superconductivity Conference 2014 (ASC 2014), 10-15 August 2014, Charlotte, NC, USA.
9. Toshihiko Kiwa, Shinogo Miyazaki, **Mohd M. Saari**, Kenji Sakai, Akira Tsukamoto, Seiji Adachi, Tsunehiro Hato, Keiichi Tanabe, Keiji Tsukada, "*Time-Domain Measurements of the Ion Transportation in the Electrolyte using HTS-SQUID's Gradiometer*", 26th International Symposium on Superconductivity (ISS 2013), 18-20, Nov. 2013, Tokyo, Japan.
10. **Mohd Mawardi Saari**, Ryuki Takagi, Toki Kusaka, Yuichi Ishihara, Yuya Tsukamoto, Kenji Sakai, Toshihiko Kiwa and Keiji Tsukada, "*Highly Sensitive Vibrating-Sample Magnetometer Using High-Tc SQUID*", The 7th East Asia Symposium on Superconductive Electronics (EASSE 2013), 23-26 Oct. 2013, Taipei, Taiwan.
11. Keiji Tsukada, **Mohd Mawardi Saari**, Kenji Sakai, and Toshihiko Kiwa, "High performance magnetometers using HTS-SQUIDs and their applications", The 7th East Asia Symposium on Superconductive Electronics (EASSE 2013), 23-26 Oct. 2013, Taipei, Taiwan.
12. Kenji Sakai, Naohiro Okamoto, Daichi Hamasaki, **Mohd Mawardi Saari**, Toshihiko Kiwa and Keiji Tsukada, "*Compact Rotating-Sample Magnetometer Using HTS-SQUID for Magnetic Susceptibility and Magnetic Relaxation Measurement*", The 7th East Asia Symposium on Superconductive Electronics (EASSE 2013), 23-26 Oct. 2013, Taipei, Taiwan.
13. **Mohd Mawardi Saari**, Ryuki Takagi, Toki Kusaka, Yuichi Ishihara, Yuya Tsukamoto, Kenji Sakai, Toshihiko Kiwa and Keiji Tsukada, "*Development of integrated AC-DC magnetometer using high-Tc SQUID for magnetic properties evaluation of magnetic nanoparticles in solution*", 11th European Conference on Applied Superconductivity (EUCAS 2013), 15-19 Sep. 2013, Genoa, Italy.
14. Miyazaki S., Kasuya S., **Saari M.M.**, Sakai K., Kiwa T., Tsukamoto A., Adachi S., Tanabe K., Tsukada K., "DC current distribution mapping system of solar panels

using a HTS-SQUID", 11th European Conference on Applied Superconductivity (EUCAS 2013), 15-19 Sep. 2013, Genoa, Italy.

15. Daichi Hamasaki, Naohiro Okamoto, **Mohd Mawardi Saari**, Kenji Sakai, Toshihiko Kiwa, Keiji Tsukada, "*Improvement of sensitivity for a compact magnetometer using HTS-SQUID with rotating sample*", 14th International Superconductive Electronics Conference (ISEC2013), 7-11 Jul. 2013, Cambridge, MA, USA.
16. Toshihiko Kiwa, Shingo Miyazaki, **Mohd M. Saari**, Kenji Sakai, Akira Tsukamoto, Seiji Adachi, Tsunehiro Hato, Keiichi Tanabe, Keiji Tsukada, "*Current Imaging of Voltaic Systems using High-Tc SQUID*", 14th International Superconductive Electronics Conference (ISEC2013), 7-11 Jul. 2013, Cambridge, MA, USA.
17. Kenji Sakai, Daichi Hamasaki, **Mohd M. Saari**, Toshihiko Kiwa, Keiji Tsukada, "*Improved rotating-sample magnetometer for magnetic relaxation measurement using HTS-SQUID*", 14th International Superconductive Electronics Conference (ISEC2013), 7-11 Jul. 2013, Cambridge, MA, USA.
18. Ryuki Takagi, **Mohd Mawardi Saari**, Kenji Sakai, Toshihiko Kiwa and Keiji Tsukada, "*Development of a Compact Magnetometer with an AC/DC Magnetic Field Using HTS-SQUID*", 14th International Superconductive Electronics Conference (ISEC2013), 7-11 Jul. 2013, Cambridge, MA, USA.
19. **M. M. Saari**, R. Takagi, K. Sakai, T.Kiwa, K. Tsukada, "*Optimization of the detection Technique for a Vibrating-Sample Magnetometer Using High-Tc SQUID*", Applied Superconductivity Conference 2012, Portland, Oregon, USA, 7-12 October 2012.
20. **M. Mawardi Saari**, Ryuki Takagi, K. Sakai, T.Kiwa, A. Tsukamoto, S. Adachi, K. Tanabe, A. Kandori, K. Tsukada, "*Compact Vibrating-Sample Magnetometer using High-Tc SQUID and Shape Dependency of Sample*", 11th International Symposium on High Temperature Superconductors in High Frequency Fields (HTSHFF 2012), Miyagi, Japan, 29 May-1 June 2012.
21. **M. Mawardi**, K. Sakai, T.Kiwa, A. Tsukamoto, S. Adachi, K. Tanabe, A. Kandori, K. Tsukada, "*Development of A Compact Moving-Sample Magnetometer employing HTS-SQUID*", 24rd International Symposium on Superconductivity (ISS 2011), Tokyo, Japan, 24-26, Oct., 2011.
22. K. Sakai, **M. M. Saari**, D. Hamasaki, T.Kiwa, K. Tsukada, "*Moisture Content Evaluation Measured by A Compact Rotating-Sample Magnetometer Using High-Tc SQUID*", 25rd International Symposium on Superconductivity (ISS 2012), Tokyo, Japan, 3-5 December 2012.
23. K. Sakai, **M. Mawardi Saari**, T.Kiwa, K. Tsukada, "*Compact Rotating-Sample Magnetometer for Relaxation Phenomenon Measurement using HTS-SQUID*", Applied Superconductivity Conference 2012, Portland, Oregon, USA, 7-12 October 2012.

24. T. Kiwa, Y. Fukudome, S. Miyazaki, **M.M. Saari**, K. Sakai, A. Tsukamoto, S. Adachi, K. Tanabe, A. Kandori, K. Tsukada, "*Magnetic Detection of Currents in an Electrolytic Cell using High-T_c SQUID*", Applied Superconductivity Conference 2012, Portland, Oregon, USA, 7-12 October 2012.
25. Y. Fukudome, S. Miyazaki, **M.M. Saari**, K. Sakai, T. Kiwa, A. Tsukamoto, S. Adachi, K. Tanabe, A. Kandori, K. Tsukada, "*Evaluation of Solar Panels by Measuring Tangential Component of Magnetic Fields*", Applied Superconductivity Conference 2012, Portland, Oregon, USA, 7-12 October 2012.
26. K. Sakai, **M. Mawardi Saari**, T. Kiwa, A. Tsukamoto, S. Adachi, K. Tanabe, A. Kandori, K. Tsukada, "*Improvement of Sensitivity for a Compact Magnetometer using HTS-SQUID and Rotating Sample*", 11th International Symposium on High Temperature Superconductors in High Frequency Fields (HTSHFF 2012), Miyagi Japan, 29 May-1 June 2012.
27. K. Tsukada, **M. Mawardi Saari**, Ryuki Takagi, K. Sakai, T. Kiwa, A. Tsukamoto, S. Adachi, K. Tanabe, A. Kandori, "*Compact Magnetometers using HTS-SQUID for Detection of Magnetic Property*", 11th International Symposium on High Temperature Superconductors in High Frequency Fields (HTSHFF 2012), Miyagi, Japan, 29 May-1 June 2012.
28. Ryuki Takagi, **Mohd Mawardi Saari**, Kenji Sakai, Toshihiko Kiwa, Akira Tsukamoto, Seiji Adachi, Keiichi Tanabe, Akihiko Kandori, Keiji Tsukada, "*A Compact Moving-Sample Magnetometer using High-T_c SQUID*", 24th International Cryogenic Engineering Conference and International Cryogenic Materials Conference 2012 (ICEC24-ICMC2012), Fukuoka, Japan, 14-18 May, 2012.
29. Shingo Miyazaki, Yohei Fukudome, **Mohd Mawardi Saari**, Kenji Sakai, Toshihiko Kiwa, Akira Tsukamoto, Seiji Adachi, Keiichi Tanabe, Akihiko Kandori, Keiji Tsukada, "*Electrical Property Mapping System of the Solar Panels using High-T_c SQUID*", 24th International Cryogenic Engineering Conference and International Cryogenic Materials Conference 2012 (ICEC24-ICMC2012), Fukuoka, Japan, 14-18 May, 2012.
30. K. Tsukada, S. Maeda, **M. Mawardi**, K. Sakai, T. Kiwa, A. Tsukamoto, S. Adachi, K. Tanabe, A. Kandori, "*Compact AC and DC magnetometers using HTS-SQUID*", 24rd International Symposium on Superconductivity (ISS 2011), Tokyo, Japan, 24-26, Oct., 2011.
31. Kenji Sakai, **Mawarudei Mohamado**, Toshihiko Kiwa, Akira Tsukamoto, Seiji Adachi, Keiichi Tanabe, Akihiko Kandori, Keiji Tsukada, "*Development of Compact DC Magnetic Susceptibility Meter using HTS-SQUID*", Superconductivity Centennial Conference 2011(EUCAS-ISEC-ICMC 2011), Hague, Netherlands, 18-23, Sep., 2011.